UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue, Suite 900
Seattle, Washington 98101-3140

June 17, 2008

Reply to
Attn Of: OWW-130

Ms. Leslie A. Cole, Director
Environment, Safety and Health Office
Department of the Navy
Puget Sound Naval Shipyard and
Intermediate Maintenance Facility
1400 Farragut Avenue
Bremerton, WA 98314

Re: PSNS NPDES Permit WA 000206-2; letters dated May 23, 2008 and June 6, 2008 regarding the Working Draft Permit and Fact Sheet

Dear Ms. Cole:

On behalf of the U.S. Environmental Protection Agency, Region 10, I'd like to thank you and the other Navy representatives for meeting with EPA on May 28, 2008, to discuss issues related to the National Pollutant Discharge Elimination (NPDES) permit for the Puget Sound Naval Shipyard. We also appreciate your discussion of the Environmental Investment (ENVVEST) project. Based on our discussion, we believe that we have outlined a path forward using the NPDES permit process. We look forward to our next meeting scheduled for June 18, 2008, to discuss schedule milestones and permitting tools amongst EPA, the Navy and the Washington Department of Ecology.

As a result of some of the discussions we had during our meeting, and more specifically the Navy's letters that we received dated May 23, 2008 and June 6, 2008, I want to assure you that EPA has taken into consideration information acquired by Phase I of Project ENVVEST while drafting the NPDES permit. For example, I believe the Navy's monitoring data and modeling efforts will be useful in conducting the mixing zone analysis and developing permit limits. Additionally, EPA is open to considering any additional information submitted by the Navy as a result of its early review and comment on the draft permit as well as during the formal public comment period. In addition, we will be considering the information generated through the ESA and tribal consultations.

In the Navy's June 6, 2008 letter, the Navy identifies major issues with the draft permit. We believe the Navy has extrapolated information and permit conditions and reached some premature conclusions which are most likely not accurate. For example, the Navy concludes that the permit will require the Navy to treat 34 million gallons per day (mgd) of ground water, cooling water, and storm water. We certainly have not come to that conclusion. Nor are we assuming the Navy will be required to send 34 mgd to the Bremerton Wastewater Treatment Plant.

EPA's primary concern is with the dry dock floor drainage and contaminated storm water from the high-risk areas. EPA believes that the highest concentrations of copper from the dry dock outfalls is from the dry dock drainage, which makes up a fraction of the volume of water discharged through the outfall. This observation is supported by the Navy's documented responses to dry dock outfall copper violations. Therefore, the permit requires that the Navy monitor the dry dock stream and investigate options to collect and treat the dry dock floor drainage. In addition, the permit requires the Navy to identify the highly contaminated storm water areas and to look at the feasibility to collect and treat the stormwater from these areas. The Navy identified this as a compliance option during the scoping of ENVVEST alternatives.

While we recognize that other wastewater sources have copper levels above the final proposed permit limits, we also recognize that the proper handling of these wastewaters is directly tied to the AKART analysis and resulting mixing zone decision that Ecology will make. Therefore, we strongly encourage you to complete the AKART analysis as soon as possible.

The impact of contaminated stormwater on Puget Sound is an important issue. We look forward to working on a schedule to accommodate the input you have provided in the June 6, 2008 letter and our need to reissue this permit.

EPA does not view the traditional NPDES process as being inconsistent with the Phase I Final Project Agreement (FPA) signed by EPA, the Navy and Ecology in 2000. As you may recall from EPA's 2004 "Identified Program Track Options" memo, it was acknowledged that "any Phase II proposal would need to be tailored to the relative procedures of the program track," with the NPDES permit application process identified as a track option. While the May 28 letter envisions using the draft NPDES permit as merely a baseline in order to formulate a Phase II proposal, EPA believes that incorporating Phase I information into a draft permit while following the traditional NPDES process is consistent with the FPA, is in keeping with EPA's position that distinct program authorities provide a mechanism for ENVVEST proposals, and is the most expedient way to reissue a permit that has been administratively extended since 1999. This is also consistent with the approach taken by several other XL projects 8-10 years.

Thank you again for meeting with us. We look forward to further discussions on the permit.

Sincerely,

Thomas G. Eaton, Director
Washington Operations Office

cc: Kevin Fitzpatrick, Ecology
Mike Lidgard
Susan Poulsom

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue, Suite 900
Seattle, Washington 98101-3140

Meeting Notes

RE: Puget Sound NPDES Permit
Mixing Zone

DATE/TIME: Tuesday, June 10, 2008, 11:00 – 12:30 PM

ATTENDEES: PSNS: Jerry Sherrel, Bruce Beckwith, Bob Johnston, Matt Jabloner. Ecology: Anise Ahmed, Jeanne Tran, Mindy Roberts, Jerry Shervy, EPA: Susan Poulsom, John Drabek

Notes:
The meeting was organized based on Bruce Beckwith's questions which were emailed before hand. (The numbered questions were emailed before the meeting, all others were posed during the meeting.)

1. What are the State's constraints on calculating mixing zones or how much flexibility does the State have in alternate methods of calculating a mixing zone?

Anise: Need to apply AKART. After AKART, collect monitoring data, compare monitored concentrations to WQS under critical conditions. If ambient concentration is greater than criteria, no mixing zone.

What are critical conditions?
Anise: Acute – daily max flow. Chronic – max monthly average flow for 3 years.

2. How do you determine mixing zones for multiple stormwater outfalls distributed across 1 1/2 miles of waterfront?

Anise: According to WAC, may grant overlapping MZ. WAC 173-201A-400-9 overlapping mixing zones. Page 41

Anise: Combined mixing zone cannot exceed the maximum size.

What are the critical conditions for stormwater mixing zones?
Anise: See Permit Writers Manual, Appendix 6. Acute Zone – 1 hour peak for a 2-year storm; Chronic – 2-year, 72-hour storm event.

Bruce: Most stormwater off piers is sheet flow.

3. How do we resolve discharges from dry-docks with the similar water being discharged by vessels along side of piers?
Need to acknowledge that the mixing zone is impacted by pier side discharge.

4. Will the State consider an expanded mixing zone or possibly a comprehensive mixing zone that would account for multiple discharges?
Anise: See WAC 173-201A-400-12. Allows for extended mixing zones in some cases. 12(a) applies to stormwater systems constructed before 1992.

Anise: Need most critical condition. Need to evaluate to determine the critical condition because that is where the water quality criteria apply. Decision may be one big mixing zone.

Process for Expanded Mixing Zone
Anise/Jean: PSNS needs to send a request for mixing zone to WQ program. Send letter to EPA, cc: Kevin Fitzpatrick.

Bruce: 80% of discharge from the dry docks is bay water. (50% from the cooling ships; the rest from groundwater)

5. How would we incorporate information from the following dry-dock discharge dye test with modeling? http://www.ecy.wa.gov/programs/wq/tmdl/sinclair-dyes_inlets/sinclair_cd/Reports/Katz_2004_DyeReleaseResults_draft.pdf

Anise: Need to know why the dye test was done. Can get the far field dispersion constant from dye test. Need 2 tidal cycles. Can use dye test to calibrate the model.

Bruce: Why do we need a model when we have results of a dye test?
Dye test alone cannot give results under critical conditions.

Bruce: PSNS already knows that it needs an expanded mixing zone. How large can the mixing zone be?
Anise: Don't necessarily need expanded mixing zone. Maybe need a diffuser. Smaller ports.

6. Would it be an advantage to use the Navy's CH3D hydrodynamic model rather than Plumes or Cormix?

Anise: Can't use 3D Model to predict near field. Water will rise up due to salinity. Use Cormix or Plumes for near field.

Mindy: With CH3D, you cannot add water to the bottom of the model cell. PSNS can use CH3D to supplement model results from Plumes/Cormix.

Anise: CH3D may give higher dilution than Cormix or Plumes. Due to depth of grid cell, entrapment. CH3D uses lateral expansion, each cell expands.

7. Would it be better to use CH3D to calculate steady-state concentrations (for critical conditions) in the ambient, including multiple sources, as opposed to trying to calculate a dilution factor each discharge individually?

Anise: For critical conditions. Use of Ebb and Flood 10^{th} and 90^{th} percentile. Run model for all scenarios use the lowest dilution obtained.

8. Can we use an ambient monitoring program to assure compliance in the receiving water rather than trying to rely on the results of an imperfect model in predict allowable discharges?

Anise: Need data to determine critical conditions. From ambient monitoring program need – size of storm event, high concentrations

DEPARTMENT OF THE NAVY

PUGET SOUND NAVAL SHIPYARD
AND INTERMEDIATE MAINTENANCE FACILITY
1400 FARRAGUT AVENUE
BREMERTON, WASHINGTON 98314-5001

IN REPLY REFER TO
5090
Ser 106.3/0234

JUN 0 6 2008

Mr. Thomas Eaton
U.S. Environmental Protection Agency
Region 10
1200 Sixth Avenue, Suite 900
Seattle, WA 98101

Re: Major Issues with Draft Permit and Action Items to Be Taken Before EPA Release of Permit for Public Review

Dear Mr. Eaton:

We would like to express our appreciation for meeting with us on 28 May 2008 to discuss our working-draft National Pollutant Discharge Elimination System (NPDES) permit as it relates to Project Environmental Investment (ENVVEST). As discussed in that meeting, this letter is intended to convey our Command's major issues with the draft permit and to identify actions that need to be taken prior to releasing this permit for public review. Enclosure (1) provides a summary of the major issues and impacts of the draft permit as perceived by Puget Sound Naval Shipyard and Intermediate Maintenance Facility (PSNS & IMF). Enclosure (2) lists the actions that PSNS & IMF considers are needed before this draft permit is officially released for public review. Unfortunately, PSNS & IMF does not control the completion of many of the actions listed in Enclosure (2) and is unable at this time to estimate a date when we believe that this draft permit will be ready for public review. We would like to discuss a timeline for release of the draft permit to the public in the meeting between Environmental Protection Agency (EPA), Washington Department of Ecology (WDOE) and PSNS & IMF scheduled for 18 June 2008.

In addition, as outlined in our letter, Ser 106.3/0225, dated 23 May 2008, to Mr. Michael Lidgard, we would like to note that we are concerned that EPA does not intend to proceed with Project ENVVEST Phase II as outlined in the Final Project Agreement (FPA) signed by EPA, WDOE, and PSNS & IMF in 2000. In our meeting on 28 May 2008, we learned that EPA's decision to not proceed with Phase II was primarily due to pressure from EPA Headquarters to issue PSNS & IMF's NPDES permit. While we can understand this concern from the perspective of someone unfamiliar with Project ENVVEST, we disagree with EPA's position to go forward with the proposed draft permit for the following reasons:

a. The Navy, in partnership with EPA and WDOE, engaged in a costly, all inclusive and comprehensive Project ENVVEST Phase I study that is becoming a model for other organizations assessing the health of Puget Sound, including Washington State's Puget Sound Partnership. The EPA has been part of the team directing this study from the

beginning. This project was designed to address the environmental questions as prioritized by the management team including WDOE and EPA. For example, the management group decided to address current known impairments to the bay including developing a fecal coliform Total Maximum Daily Load (TMDL) prior to addressing the impact of metals. To halt further work on Project ENVVEST and to issue a new NPDES permit without taking advantage of the lessons of Phase I will violate the FPA, not be in the best interests of any of the parties, will result in issuance of a permit with requirements that PSNS & IMF cannot meet and will not result in a net improvement for the environment.

b. The extensive data set collected by the Project ENVVEST team, including EPA, indicates that there are no measurable detrimental impacts to water quality or marine life from copper discharged by PSNS & IMF dry-docks or storm water systems. Extensive environmental monitoring supports the case that current PSNS & IMF practices are not negatively impacting water, sediment, or tissue quality.

c. As explained in our 28 May 2008 meeting, compliance with the proposed limits would require PSNS & IMF to collect and divert up to 34 million gallons daily of additional water to the City of Bremerton's Publicly Owned Treatment Works (POTW).

(1) The volume of water depends on the number of vessels in our dry-docks and the season. In addition to the Bremerton POTW not being designed to handle this additional hydraulic loading, the cost of connecting our lines to direct the discharge to the sanitary sewer is estimated to cost hundreds of millions of dollars. Further, Bremerton's facility is neither designed to handle large volumes of salt water nor to remove metals in their existing treatment process. We believe that the expenses incurred to accomplish the aforementioned will not provide a net benefit to the environment as this will simply move the discharge from PSNS & IMF to the Bremerton POTW.

(2) Technology does exist to treat salt water to these extremely low limits. However, the current treatment technology is inadequate to handle the volume of water generated by our dry-docks. Use of this technology would require the installation of massive water storage capability. The cost and space requirements are prohibitive even when compared to the extremely high cost of collection and diversion. Additionally, it should be noted that construction of a system capable of collecting dry dock and storm water from a complex facility of this size will severely impact our ability to support the Navy's ship maintenance requirements for many years.

d. While diversion to the sanitary sewer will meet the requirements of this permit, we believe that it will provide a net negative benefit to the environment. The enormous expenditure of natural and financial resources required to construct, operate and maintain this system, which will pump up to 34 million gallons of

ground water, cooling water and storm water per day and addresses only 3 percent of the copper entering Sinclair and Dyes Inlets, is poor environmental stewardship and a poor use of funds given the data from Project ENVVEST Phase I that indicates that current PSNS & IMF discharges are not negatively impacting water, sediment, or tissue quality.

e. The PSNS & IMF believes that issuing the proposed draft permit will raise more citizen concerns and will result in wasted administrative time and money for the appeal and/or enforcement of a permit that PSNS & IMF is unable to fully comply with. We would like to emphasize that we believe the Project ENVVEST process needs to be utilized to develop a new permit in a timely manner that is protective of the environment and supportive of PSNS & IMF's mission. The information to develop a permit that is protective of the environment currently exists in the body of knowledge acquired during Project ENVVEST Phase I and can be applied in a timely manner through partnership with Navy, EPA and WDOE following the Phase II process.

f. For the last two years, PSNS & IMF has requested a baseline permit from the EPA so that we could draft the least burdensome Project ENVVEST Phase II proposal that would allow us to continue our mission more efficiently with decreased impacts to the environment, based upon the lessons learned in Project ENVVEST Phase I. While we understand the EPA's desire to issue PSNS & IMF an NPDES permit in a timely manner, the scientific data obtained during Project ENVVEST Phase I and the process contained in the FPA should not be abandoned for the sake of expediency.

g. Subsequent to the 28 May 2008 meeting at EPA, we contacted WDOE, Mr. Kevin Fitzpatrick, to discuss the outcome of that meeting. Mr. Fitzpatrick expressed concern about WDOE's ability to provide adequate technical resources for review to support EPA's end of summer deadline.

We would appreciate your response indicating your general agreement, and/or suggested changes to, the steps, outlined in Enclosure (2), for moving this process forward. We look forward to

discussing this further with you at our follow-up meeting scheduled for 18 June 2008. Please contact me at 360-476-1932 or Steven Rupp at 360-476-6009 if you have any questions or comments you would like to have addressed before our meeting.

Sincerely,

L. A. Cole

L. A. COLE
Director, Environmental, Safety and Health Office

Encl: (1) PSNS & IMF's Major Draft Permit Issues
(2) Actions to be Taken Before EPA Release of Permit for Public Review

Copy to:

Ms. Jeanne Tran, Washington Dept. of Ecology
Mr. Kevin Fitzpatrick, Washington Dept. of Ecology
Mr. Michael Lidgard, EPA Region 10
Mr. Michael Gearheard, EPA Region 10
Ms. Elin D. Miller, Administrator, EPA Region 10

PUGET SOUND NAVAL SHIPYARD & INTERMEDIATE MAINTENANCE FACILITY'S MAJOR DRAFT PERMIT ISSUES

Enclosure (1)
5090 Ser 106.3/0235

PUGET SOUND NAVAL SHIPYARD & INTERMEDIATE MAINTENANCE FACILITIES MAJOR DRAFT PERMIT ISSUES

1. DRY-DOCK DISCHARGES. The draft permit requires that, at a minimum, all the water running off the floor of the dock be treated and/or diverted to the sewer. Current data shows that this action will not result in compliance with the limits for copper, arsenic, and temperature for the following reasons:

a. Copper. The contribution of copper from vessel cooling water will exceed the discharge limits. In addition, the permit makes no allowance for the contribution of copper from bay silt deposited in the drainage system during docking evolutions. A limited study conducted by Puget Sound Naval Shipyard & Intermediate Maintenance Facility (PSNS & IMF) indicated that the minimum copper content of this cooling water is 5 ppb with a median value of approximately 10 ppb. A comprehensive study of copper concentrations conducted at Pearl Harbor Naval Shipyard determined that non-contact cooling water discharges measured an average of 23 ppb.

b. Arsenic. The arsenic in the hydrostatic relief and cooling water will exceed the discharge limits. This water comes from Sinclair Inlet where Project ENVVEST ambient water studies show the concentration of arsenic to be 1.3 ppb. The draft permit limit is 0.16 ppb.

c. Temperature. The ambient temperature of Sinclair Inlet measured by WDOE's Puget Sound Assessment and Monitoring Program (PSAMP) regularly exceeds the discharge limits. Since the majority of water discharged from our dry-docks is bay water, the discharge temperature limit will be exceeded prior to the addition of heat from normally operating vessel equipment. The cooling water used by vessels in our dry-docks can be up to 12 Million Gallons per Day (MGD). Cooling this volume of water to achieve the limits of the permit would require massive cooling-towers in order to put this heat into the air rather than the water. These vessels are allowed to discharge this same cooling water while waterborne.

It is apparent to us that compliance with the proposed dry-dock discharge limits will require collection and treatment of not only the water exposed to industrial work in the dry-docks, but all the water discharged from the dry-dock drainage system. This volume of water can be up to 20 MGD depending on the total number and type of vessels dry-docked at any given time. Treating and cooling this volume of water is extremely impracticable, leaving diversion to the sewer as our only option. Diversion to the sewer will require massive modifications to the dry-docks and the facility's sanitary sewer system as well as more than tripling the current 10.1 MGD design capacity of the City of Bremerton's Publicly Owned Treatment Works (POTW). Unfortunately, while diversion to the sanitary sewer will meet the requirements of this permit, PSNS & IMF considers that the expenses incurred to accomplish the aforementioned will not provide a

net benefit to the environment as this will simply move the discharge from PSNS & IMF to the Bremerton POTW. The construction, operation and maintenance of a facility capable of cooling and pumping 20 million gallons of ground water and cooling water per day only addresses at most 3 percent of the total amount of copper entering Sinclair and Dyes Inlets. This is poor environmental stewardship and a poor use of funds as Project ENVVEST Phase I data indicates that current PSNS & IMF discharges are not negatively impacting water, sediment, or tissue quality.

2. STORM WATER. The permit requires compliance with extremely low storm water discharge limits within five years. We are not aware of any facility or municipality that can achieve these storm water limits. Achieving the limits for copper and zinc will likely require treatment of not only the storm water from the facility's industrial areas, but the community areas as well. Project ENVVEST conducted extensive sampling of storm water (the majority of which is non-industrial) across Kitsap County. This sampling shows that the majority of storm water from all areas exceeds this permit's copper limit. Passive storm water treatment capable of achieving these low levels does not exist. Active systems are available, but have only been used for treating relatively small volumes of water at a significant cost per gallon. The only other option is diversion of storm water to the sewer. This will require a ten fold increase in this facility's sanitary sewer capacity. In addition, the volume of water from just the 220 acre Industrial Area for a 24-hour/10-year storm would be more than double the design capacity of the City of Bremerton's POTW.

3. COMPLIANCE SCHEDULES. The compliance schedules for storm water and dry-docks are not achievable. Any construction project in excess of $750,000 requires the approval of the United States Congress. The funding process alone would take a minimum of 3 years after the development of an initial design and cost proposal. We estimate that the construction of a system capable of collecting and diverting storm and dry-dock runoff water from a complex industrial facility covering 220 acres with approximately 1.5 miles of shoreline would take a minimum of 10 years. In addition, the disruption caused by the construction would severely impact our ability to support the Navy's ship maintenance requirements.

4. BEST MANAGEMENT PRACTICES. The draft permit contains detailed Best Management Practices (BMP) concerning how we would be allowed to conduct our industrial process and includes discharge limits for every outfall to Sinclair Inlet. It is our position that if the EPA gives us discharge limits at each outfall, it is up to us how we achieve them. Therefore the BMPs are inappropriate. In addition, many of the storm water BMPs listed are overly prescriptive, unnecessary and in some cases impractical or even counter-productive within the facility. For example:

a. The ban on mobile fueling and the requirement all fueling be done at a covered fuel station is impractical and counter-productive.

It is impractical to crane-lift every piece of rolling stock from the dry-dock for fueling.

Equipment inside and outside of the dry-docks such as air compressors, blast equipment, paint compressors, air conditioning units, etc. require mobile fueling.

It is impractical to move rail mounted portal cranes to remote fueling locations.

Since this facility has extensive spill prevention procedures in place and has no history of problems with mobile fueling operations, this requirement is unnecessary.

b. Daily sweeping/vacuuming of 220 acres of complex and intensely used industrial areas is not practical.

5. SAMPLING REQUIREMENTS. The sampling and analysis requirements for the dry-dock drainage system, storm water, ambient waters, and dry-dock floor run-off are excessive and require extremely low quantification levels. The proposed quantification levels for metals will increase the analysis cost of each sample by at least a factor of 10. In addition, the clean sampling techniques required will greatly increase the cost of collecting samples.

6. NEW ANALYTES. The addition of discharge limits and monitoring requirements for arsenic and mercury from dry-dock discharges is unnecessarily burdensome since neither metal is used in any shipyard industrial process.

ACTIONS TO BE TAKEN BEFORE ENVIRONMENTAL PROTECTION AGENCY RELEASE OF PERMIT FOR PUBLIC REVIEW

Enclosure (2)
5090 Ser 106.3/0235

ACTIONS TO BE TAKEN BEFORE EPA RELEASE OF PERMIT FOR PUBLIC REVIEW

1. The Environmental Protection Agency (EPA) will incorporate comments discussed at the staff level meeting between Bruce Beckwith, Puget Sound Naval Shipyard & Intermediate Maintenance Facilities (PSNS & IMF) National Pollutant Discharge Elimination System (NPDES) Program Manager, and Susan Poulsom, EPA Region 10 Permit Writer, on 23 May 2008.

2. The PSNS & IMF will submit AKART study and proposed actions to WDOE for review, comment, and approval. Please note that because PSNS & IMF does not own the facility that it occupies, all AKART proposals that require upgrading utilities, and/or new facility construction must be reviewed and agreed upon by Commander Naval Installations Command (CNIC). The CNIC has been established in Washington D.C. to consolidate the management of Navy real property. The Commander, Navy Region Northwest (CNRNW) reports to CNIC and PSNS & IMF is now a tenant of CNRNW. The CNRNW is responsible for providing management and funding of major facility repairs or upgrades. Naval Facility Engineering Command Northwest (NAVFAC NW) is now responsible for most utility repairs or upgrades such as changes to the sewer system. Funding for major utility repairs or upgrades can often involve competing for limited resources with other CNRNW facilities and is a multi-year budgeting process. Estimated completion: 30 September 2008.

3. If the EPA decides to modify the process described in the Project ENVVEST FPA, EPA needs to explain in writing to PSNS & IMF, Washington Department of Ecology (WDOE) and Project ENVVEST technical and community stakeholders that Project ENVVEST Phase II will not go forward as described in the Project ENVVEST Final Project Agreement published in Federal Register Vol. 65, No 170/Thursday, 31 August 2000, and EPA's proposed alternative to this process.

4. The EPA and WDOE will resolve issues surrounding using a Water Effects Ratio (WER) to calculate effluent limits per WDOE's Water Quality Standard. As we understand it, the WDOE believes that they have the authority to adjust the water quality criteria for copper in a permit using a WER whereas the EPA believes that the WDOE must go through legislative rule making to develop a site-specific water quality criterion.

5. The EPA will respond to PSNS & IMF's formal request, (letter Ser 106.32/0219, dated 29 June 2007), for implementation of a WER.

6. The PSNS & IMF and WDOE will negotiate terms and requirements for implementation of AKART.

7. The WDOE will describe appropriate mixing zones for PSNS & IMF discharges based on AKART implementation for inclusion in the draft permit.

8. The PSNS & IMF will complete detailed review of permit and fact sheet and forward technical changes and factual issues for resolution. Please note that due to the enormous cost and impacts to Navy operation in the Pacific Northwest represented by this permit, PSNS & IMF will need time to coordinate reviews and comments with internal PSNS & IMF organizations as well as with CNRNW, NAVFAC NW and Naval Sea Systems Command prior to formally submitting comments to the EPA. Estimated completion: 60 days after completion of the action described in paragraph 7 above.

3606276901

"Beckwith, Bruce CIV Code 106.3, Code 106.32" <bruce.beckwith@navy.mil>
06/09/2008 04:30 PM

To <johnston@spawar.navy.mil>, "Sherrell, Gerald M CIV Code 106.3, Code 106.32" <gerald.sherrell@navy.mil>, "Jabloner, Matt L CIV NAVFAC NW, EV1" <matt.jabloner@navy.mil>,
cc "Rupp, Steven S CIV Code 106.3, Code 106.3" <steven.rupp@navy.mil>
bcc

Subject PSNS&IMF Mixing Zone Discussion

History: This message has been forwarded.

Background:
PSNS&IMF has the following outfalls:

Dry-dock drainage system - 3 main outfalls discharging intermittently between 7,000 gpm and 15,000 gpm. The discharges for two of the outfalls are typically one hour out of four, and the third outfall is 8 minutes out of 30 minutes. There are three other outfalls that are used infrequently. These outfalls do not have diffusers.

Steam plant wastewater treatment plant - one outfall with a diffuser

Storm water - Nearly 100 outfalls with the larger outfalls discharging below tide level.

Topics for discussion:

1. What are the State's constraints on calculating mixing zones or how much flexibility does the State have in alternate methods of calculating a mixing zone?

2. How do you determine mixing zones for multiple stormwater outfalls distributed across 1 1/2 miles of waterfront?

3. How do we resolve discharges from dry-docks with the similar water being discharged by vessels along side of piers?

4. Will the State consider an expanded mixing zone or possibly a comprehensive mixing zone that would account for multiple discharges?

5. How would we incorporate information from the following dry-dock discharge dye test with modeling?

http://www.ecy.wa.gov/programs/wq/tmdl/sinclair-dyes_inlets/sinclair_cd/Reports/Katz_2004_DyeReleaseResults_draft.pdf

6. Would it be an advantage to use the Navy's CH3D hydrodynamic model rather than Plumes or Cormix?

7. Would it be better to use CH3D to calculate steady-state concentrations (for critical conditions) in the ambient, including multiple sources, as opposed to trying to calculate a dilution factor each discharge individually?

8. Can we use an ambient monitoring program to assure compliance in the receiving water rather than trying to rely on the results of an imperfect model in predict allowable discharges?